COLLIANT TOTOC

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ABSTRACT OF THE DISCLOSURE

A method for embryogenesis and a method for plant regeneration are disclosed. Microspore-containing plant segment from donor plants are harvested and incubated under pre-treatment conditions to maintain microspores at a uninucleate cell cycle G1 phase. Pre-treatment conditions comprise cold water or an aqueous solution of about 0.2 - about 1.0 mol/liter sugar alcohol, for example mannitol. Microspores are isolated from the plant segment and embryogenesis of microspores is induced in induction medium, thereby producing embryos. Green plants may be regenerated from the embryos produced. Arabinogalactan protein, auxin and ovary co-culture may be added to the induction medium to enhance embryogenesis from microspores.